In the Claims

The following is a complete listing of the claims and replace all prior claims in the application:

1. (Currently Amended) A controller, comprising a processor for controlling a write operation and for receiving a thermal signal from a read channel, wherein the processor compares the thermal signal to a predetermined threshold to determine whether to initiate a re-write operation, wherein the thermal signal is a bandpass filtered signal that is tuned to the air bearing resonant frequencies associated with a predetermined drive design.

2. (Canceled)

3. The controller of claim 1 wherein the processor initiates the re-write operation when the thermal signal exceeds the predetermined threshold.

4. The controller of claim 3 wherein the thermal signal indicates a flying height variation for a transducer.

5. The controller of claim 4 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to media to become attenuated resulting in unrecoverable errors when reading the written signal.

6. The controller of claim 3 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to media to become attenuated resulting in unrecoverable errors when reading the written signal.

7. The controller of claim 1 wherein the thermal signal indicates a flying height variation for a transducer.

8. The controller of claim 1 wherein the processor initiates a write reassign when a thermal signal exceeding the predetermined threshold is detected during the rewrite.

9. The controller of claim 1 wherein the processor initiates a read/verify after the rewrite.

10. (Currently Amended) A disk drive, comprising:

a processor for controlling reading and writing of data on a data recording medium;

a write channel for processing write signals for recording on the data recording medium; and

a read channel for reading data from the data recording medium and for providing a thermal signal representing flying height variation;

wherein the processor compares the thermal signal to a predetermined threshold to determine whether to initiate a re-write operation, and wherein the thermal signal is a bandpass filtered signal that is tuned to the air bearing resonant frequencies associated with a predetermined drive design.

11. (Canceled)

12. The disk drive of claim 10 wherein the processor initiates the re-write operation when the thermal signal exceeds the predetermined threshold.

13. The disk drive of claim 12 wherein the thermal signal indicates a flying height variation for a transducer.

14. The disk drive of claim 13 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to media to become attenuated resulting in unrecoverable errors when reading the written signal.

15. The disk drive of claim 12 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to media to become attenuated resulting in unrecoverable errors when reading the written signal.

16. The disk drive of claim 10 wherein the thermal signal indicates a flying height variation for a transducer.

17. The disk drive of claim 10 wherein the processor initiates a write reassign when a thermal signal exceeding the predetermined threshold is detected during the rewrite.

18. The disk drive of claim 10 wherein the processor initiates a read/verify after the rewrite.

19. (Currently Amended) A method for predicting write failure resulting from flying height modulation, comprising:

initiating a write operation for writing data to a recording medium;

monitoring a read channel during the write operation;

comparing a thermal signal from the read channel to a predetermined threshold; ~~and~~

re-writing the data if the thermal signal exceeds the predetermined threshold; and

bandpass filtering the thermal signal such that the bandpass filtered signal is tuned to the air bearing resonant frequencies associated with a predetermined drive design.

20. (Canceled)

21. The method of claim 19 wherein the thermal signal indicates a flying height variation for a transducer.

22. The method of claim 21 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to the medium to become attenuated resulting in unrecoverable errors when reading the written signal.

23. The method of claim 19 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to medium to become attenuated resulting in unrecoverable errors when reading the written signal.

24. The method of claim 19 further comprising continuing the write operation when the thermal signal does not exceed the predetermined threshold.

25. The method of claim 19 further comprising initiating a write reassign when a thermal signal exceeding the predetermined threshold is detected during the rewrite.

26. The method of claim 19 further comprising initiating a read/verify after the rewrite.

27. (Currently Amended) An article of manufacture comprising a program storage medium readable by a computer, the medium tangibly embodying one or more programs of instructions executable by the computer to perform a method for predicting write failure resulting from flying height modulation, the method comprising:

initiating a write operation for writing data to a recording medium;

monitoring a read channel during the write operation;

comparing a thermal signal from the read channel to a predetermined threshold; and

re-writing the data if the thermal signal exceeds the predetermined threshold;

wherein the thermal signal is a bandpass filtered signal that is tuned to the air bearing resonant frequencies associated with a predetermined drive design.

28. (Canceled)

29. The article of manufacture of claim 27 wherein the thermal signal indicates a flying height variation for a transducer.

30. The article of manufacture of claim 29 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to the medium to become attenuated resulting in unrecoverable errors when reading the written signal.

31. The article of manufacture of claim 27 wherein the thermal signal exceeding the predetermined threshold indicates a flying height variation that will cause the higher frequency components in a signal written to medium to become attenuated resulting in unrecoverable errors when reading the written signal.

32. The article of manufacture of claim 27 further comprising continuing the write operation when the thermal signal does not exceed the predetermined threshold.

33. The article of manufacture of claim 27 further comprising initiating a write reassign when a thermal signal exceeding the predetermined threshold is detected during the rewrite.

34. The article of manufacture of claim 27 further comprising initiating a read/verify after the rewrite.

35. (Currently Amended) A disk drive, comprising:

processor means for controlling reading and writing of data on a data recording medium;

write channel means for processing write signals for recording on the data recording medium; and

read channel means for reading data from the data recording medium and for providing a thermal signal representing flying height variation;

wherein the processor means compares the thermal signal to a predetermined threshold to determine whether to initiate a re-write operation and wherein the thermal signal is a bandpass filtered signal that is tuned to the air bearing resonant frequencies associated with a predetermined drive design.